CABOT'S QUILT

The Scientific Heat Insulator and Sound Deadener

Samuel Cabot, Inc.

Boston, Mass.

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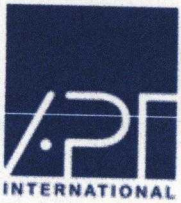

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Cabot's Quilt

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Form 20-5-1912

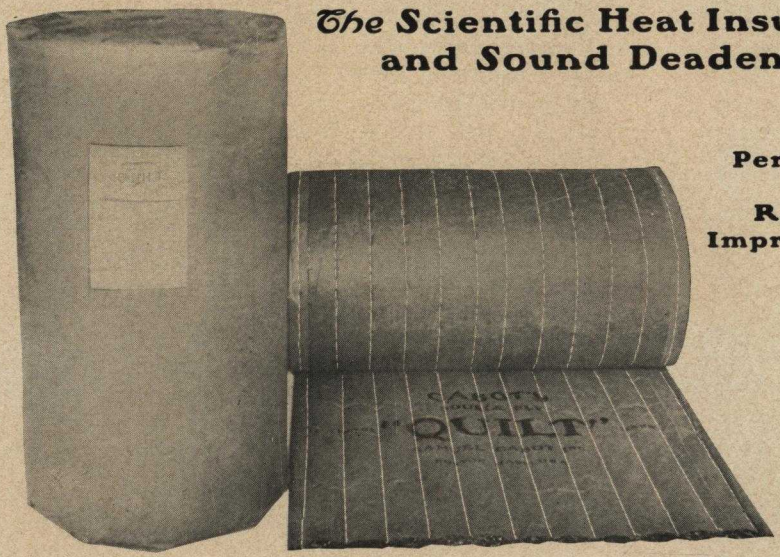
The Old Pierce House, Dorchester, Mass. Built 1635.

This admirably-preserved specimen of the earliest New England type of building is still owned by direct descendants of its builder, and is reverently cared for. In 1893 the walls were opened for repairs, and they were found to be stuffed between the studding with eel-grass, which was in a perfect state of preservation after more than two and a half centuries!* The Babcock House, Milton, Mass., built 1723, and other old houses in Connecticut, Nova Scotia, etc., have since been found to be insulated in the same way, and the eel-grass undecayed, thus proving beyond question the permanence of this fibre with which Cabot's Sheathing and Deafening Quilt is made.

* We have in a bottle in our office a sample of this 275-year-old eel-grass, with a statement from the owner, as shown on page 4.

Cabot's "Quilt"

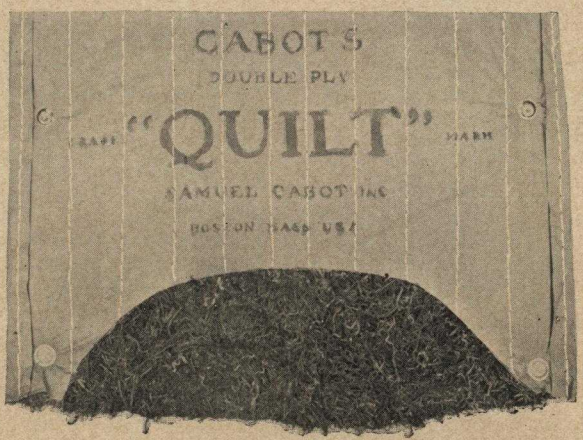
The Scientific Heat Insulator and Sound Deadener



Perfected by Recent Improvements

"Quilt" is a scientifically-constructed lining for making houses warm in winter and cool in summer, for deadening sound in floors and partitions, for insulating cold stores, refrigerators, ice-houses, etc., and for numerous other purposes. It was invented about twenty years ago, and its introduction has revolutionized insulating and sound-deadening methods in this country and abroad. It has been constantly improved, but the radical improvements recently made (see page 19) have so greatly strengthened it and developed its usefulness as to have increased its value more than fifty per cent.

Quilt is a felted matting of cured eel-grass stitched with strong thread, securely fastened between two layers of exceedingly strong, tough "Kraft" paper. The eel-grass fibres are long and flat, and cross each other at every angle, as shown in the illustration. This makes a thick, elastic cushion filled with dead-air spaces, and dead air is the most perfect non-conductor of heat. It will be seen at once that this is immensely superior to the common building papers



Photograph Showing Laminated Matted Structure of Eel-grass in Quilt.

and felts. These materials are thin and dense, and contain no air spaces, so that their insulating power is very poor, and they are likely to disintegrate and become worthless in a short time. The very best of them are vastly inferior to Quilt, *and exhaustive tests upon scientifically accurate apparatus prove that one layer of double-ply Quilt has a greater insulating power than forty layers of cheap building paper!* (See page 19.)

Why Eel-Grass?

Quilt is made of eel-grass because that fibre has marvellous qualities that make it immensely superior to any other known.*

275-Year-Old Eel-Grass from Old Pierce House.
(See frontispiece.)

1. It has the long, flat blade that is necessary to make the air spaces which furnish its great insulating power. A round fibre will not do it.
2. It will not decay! This remarkable fact is proved by many examples, and we have in our office a sample of eel-grass that is over 275 years old. (See illustration and frontispiece.)
3. It is absolutely sanitary and will not harbor insects or vermin.
4. It is very uninflammable! It will char and shrivel under flame, but fire will not spread in it. No other vegetable fibre has this property, and it makes Quilt an actual fire retardent.†
5. It grows in salt water and contains silicon to a large extent in place of the carbon of plants that grow in the air. This makes it non-inflammable, prevents rats and mice from eating it, and helps protect it against decay.
6. It never loses its toughness and elasticity.

Seaweed taken from the Pierce House Dorchester in 1873. The house was built about 1635 and has never been disturbed. Geo. Francis Pierce, Col. Ann Jones

Boston, April 5, 1904.

"You will be interested to know of an experience I had recently with your seaweed quilting, which proved it to be a good fire resister. In finishing a room in my stable, I covered the studding with one thickness of quilting for warmth, and then sheathed it over with pine sheathing, which was finally varnished. The room took fire from an overheated stove, and, although some of the sheathing burned completely through, the studding behind the sheathing remained in perfect condition and showed no trace of fire."

S. W. MEAD.
(Everett & Mead, Architects.)

*Quilt is the pioneer article of its kind. It has been frankly imitated by three or four products using waste flax, or tow, and cattle hair in place of eel-grass. Note that neither of these have flat fibres and that they have none of the qualities of eel-grass cited above. They will decay, harbor insects and vermin, and tow is the most inflammable of all vegetable fibres. "Like fire in flax" is an expression used in Ireland, which is a flax country, to illustrate great speed. Of cattle hair a high authority says . . . " is usually contaminated with bacteriological poison from its origin, and may also contain arsenic salts . . . it is not permanent, becoming fragile and powdered when very dry, and rotten when wet."

†Test the sample with a match. The paper only will burn, and very slowly; the grass will simply shrivel and char while the flame is applied, but will not carry fire. The Asbestos Quilt is almost absolutely fireproof.

For Lining Houses

Single-ply Quilt is usually sufficient for this purpose. *One layer of it is as warm as twenty-eight layers of common cheap building paper*, and far warmer than back-plastering, as well as cheaper and more permanent.

This means that Quilt will actually keep a house warm in the coldest weather with the minimum of artificial heat, and by so doing *it will pay for itself in two ordinary winters by saving fuel*, and will keep on saving fuel and doctor's bills and making the house comfortable as long as the house stands. Nothing is more wasteful than trying to heat a cold house, with huge heaters and corresponding coal bills. A cheap house can be made permanently warm and cozy for less than forty dollars. Warmth is the most essential element of success in house building. A cold, draughty house is a failure, and in figuring costs, therefore, Quilt should not be cut out merely because it cannot be seen. Its absence is sure to be felt. The drawings on page 21 show several methods of applying Quilt in houses, but it can be used in any way that paper or felt is used, and do not forget to line roofs as well as walls, because a large part of the heat escapes through the roof. This is shown by the constant melting of snow on roofs when the temperature is below freezing.

RESIDENCE OF J. E. WING, MECHANICSBURG, OHIO.
E. E. Holman, Architect, Philadelphia.

"The house is framed in the usual way, and sheathed solid with hemlock boards put on over Sheathing Quilt nailed to the studding." — *Country Life in America, March, 1907.*

The Cost of Cabot's Sheathing Quilt for Lining this Entire House was $36.69.

Madison, N. J., November 28, 1910.

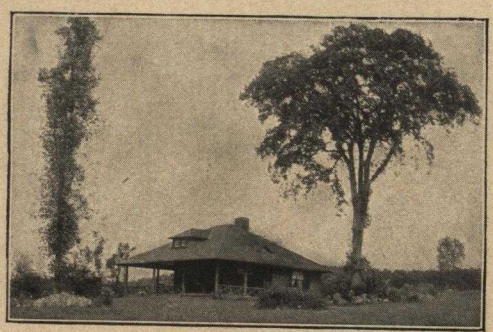
"While living in Great Barrington, Mass., and publishing *The Berkshire Courier*, I used your Quilt Sheathing in the erection of a dwelling, and I think it was one of the means that won for me the record of using less coal in my house than was used by any resident in the town in a house of the same size."

J. E. CLAREY, care of *The Madison Eagle.*

Hanover, N. H., April 26, 1910.

"When my house was built, twelve years ago, we used your Sheathing Quilt underneath the shingles. It has proved extremely satisfactory in maintaining an even temperature in both summer and winter. The house is exposed to strong winds from the north, but has kept warm in winter with a notably small consumption of coal. In the summer, though exposed to sun, the house is kept from radiating of heat by the Quilt, and the interior is remarkably cool."

HERBERT D. FOSTER,
Dept. of History, Dartmouth College.



This Bungalow Is Lined, Roof and Walls, with Cabot's Sheathing Quilt, and the owner says:

"Experience has more than justified this method. The second story rooms are in summer as cool as those on the first floor, while in winter all the rooms are warm and comfortable in the coldest windy weather."

The cost was $20 for the whole house.

Quilt makes houses cool in summer as well as warm in winter, by keeping the heat out. It is very popular in the South for lining roofs, and it makes upper rooms habitable which would otherwise be unbearably hot.

Joliet, Ill., May 24, 1900.

"I send you by this mail photograph of my house built last fall at Daytona, east coast of Florida, the sides, ends and roof of which are covered with your Sheathing Quilt. During the warm weather now prevailing in Florida, notwithstanding the considerable roof surface exposed to the full sunshine, we find the upper rooms as cool as those upon the main floor. As a material providing insulation against heat or cold, it has proved very satisfactory, and we are all well pleased with it."

GEORGE N. CHAMBERLIN.

Des Moines, Ia., August 23, 1909.

"I covered my entire house, sides and roof, with one-ply Quilt. August 1 I moved into the house, and, as it was not finished inside, I stored the goods in the cellar and attic, and have lived in the attic ever since. We have had some very hot weather. I have a thermometer hanging under the roof, and all the time it was not more than two degrees warmer in the attic than it was on the first floor. The roof boards were merely warm in the hottest part of the day. The attic has cooled off almost immediately after sunset, and I have had cool sleeping there this hot weather. If it were not for the Quilt on the roof, it would be unbearably hot up there, the boards absorbing and giving off latent heat all night. I have shown many persons this feature of the building."

ALSON SECOR.

The little sun-house shown herewith is a remarkable illustration of the value of Quilt as an insulator. It was lined with double-ply Quilt, having a value greater than forty layers of cheap paper.

Canton, Mass., February 20, 1905.

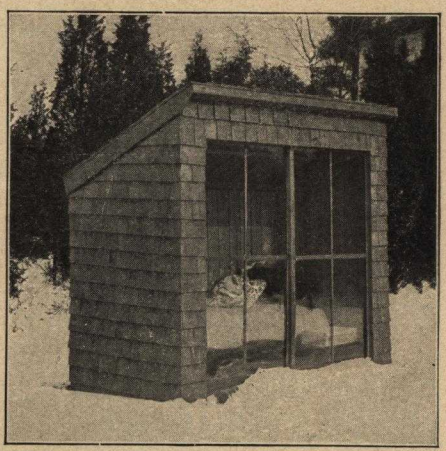
SAMUEL CABOT, ESQ.,
141 Milk Street, Boston.

Dear Sir: The little sun-house of which you have the photograph is lined with one layer of your double-ply Quilt on roof, ends, and floor, and two layers on the back, with one layer of ordinary red paper over the Quilt.

The result is most extraordinary, and thermometers placed inside and outside show a difference in temperature of from 60° to 100° F., depending upon the amount of sunshine and the outside temperature. I have several times seen the inside thermometer (which is so placed that the sun does not strike it) register 100° and over, while the outside temperature stood at zero or lower. This difference is due wholly to the sun and insulation, as there is no artificial heat whatever in the house.

Yours truly,

(Signed) NETTIE F. FARWELL.



Sun-house insulated with Cabot's Sheathing Quilt which achieved an inside temperature of over 100° (in the shade) when the temperature outside was below zero—a result due wholly to the sun's heat and the perfect insulation which prevented it from escaping.

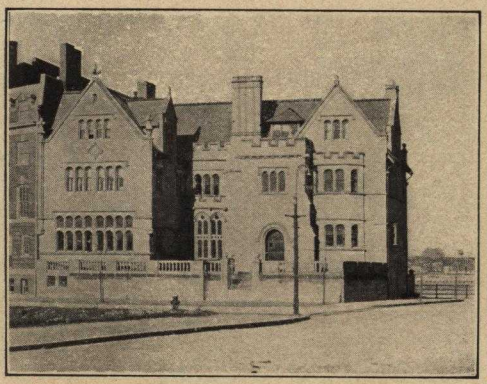
The Significance of this Remarkable Result

If a lining of Quilt will make a difference of 100° in a shanty built of one layer of boards and one of shingles, and warmed by the sun's rays alone, how much in fuel and how much in doctor's bills will be saved to the man who lines his house with it?

No exact answer can be given to this conundrum, but it is conservative to say that he will save enough in a single severe winter to more than pay for the extra cost of the Quilt, and the benefit derived from having a vastly more comfortable house will be clear gain.

Sound Deadening

Quilt is even more successful as a sound-deadener than as an insulator. *It is the first thing that was ever scientifically made for deadening sound.* None of the so-called deadeners that had previously been used were made for sound-deadening purposes, but were brought into this field in a hap-hazard, groping way because no really efficient thing existed. They were absolutely ineffective because they had no sound-absorbing power. Sound travels in waves, *and Quilt is the only deadener that has the power of breaking up and absorbing these sound-waves,* which pass through any dense or vibrant substance, but are lost in the elastic, laminated cushion of Quilt. Felts are dense and the sound freely passes through them, and this is true not only of plain felts, but of those that are pressed into corrugations, a device which is frequently resorted to for the sake of appearances. Mineral wool is not permanent. It really is a spun glass, and it breaks down and finally is reduced to a powder. Moreover, it can be used only between the floor timbers or studding, and cannot be intervened between the floor itself and the timber and thus cut off the telephonic connection. Quilt does so intervene, and a floor floated upon it is isolated completely.



CITY RESIDENCE, BOSTON.
Deadened with Quilt.
Chapman & Frazer, Architects, Boston.

"Naulakha," Waite, Vt., December 10, 1895.

"We are about to wood-ceil an attic 80 x 20, and wish to put your sheathing under the wood. I make it that we shall need some two thousand square feet of the Quilt. Could you kindly let us have an estimate on this? I have found the Quilt invaluable as a deadener of noise and now wish to test it as a weather protection."

RUDYARD KIPLING.

(Mr. Kipling wrote next year, saying that he had found it "a very efficient wind, cold, and sound protector.")

Haverhill, Mass.,
April 6, 1897.

"We used your Quilt on floor, between floorings, and on walls, with furring strips to hold it to the studs, lathing to the furring strips, to deaden sound for an invalid's room. The owner tells us that he is much pleased with it; that carpenters hammering in the hall adjoining do not disturb him in the least."

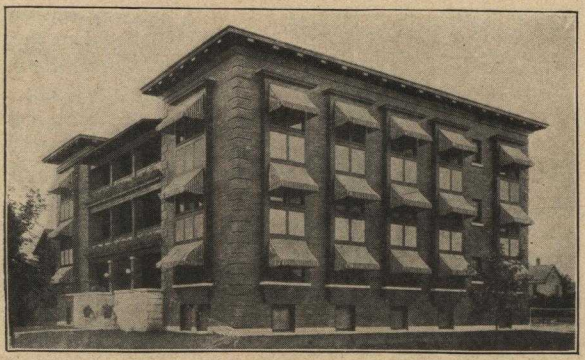
PERKINS & BANCROFT,
Architects.

"I used your two-ply Sheathing Quilt for deafening between two floors with no plaster to intervene, and the result was excellent."

FREDERICK BAIRD
Cleveland, Ohio.

CANADIAN PACIFIC RAILWAY STATION AND ROYAL ALEXANDRA HOTEL, WINNIPEG.
Cabot's Deafening Quilt Used for Sound Deadening.

Hotels and Apartments. Sound-deadening is a question of actual dollars to the hotel owner, for people will not live in apartments where their privacy is invaded by all the sounds of the rooms adjoining, and where their own conversation becomes instantly the property of their neighbors. Quilt is the remedy. It is unequaled as a deadener in any respect, and has been used with special success in summer hotels (which are peculiarly subject to this defect) under carpets as well as in walls and floors.



VASSAR APARTMENTS, ROCHESTER, N. Y. *Foote & Headley, Architects, Rochester.*
Deadened with Quilt.

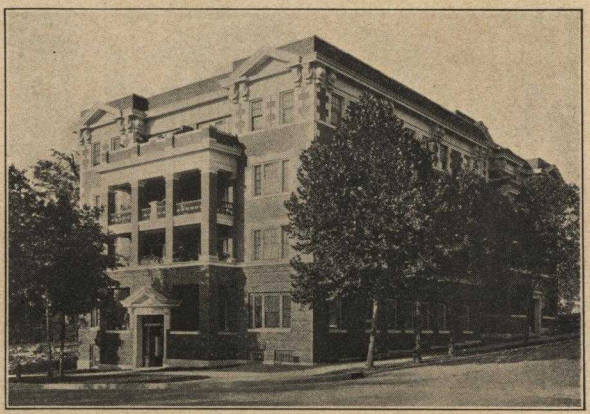
Joliet, Ill.,
April 26, 1909.

"Have specified your Deafening Quilt for flat buildings, and am well satisfied with it."

HERBERT COWELL,
Architect.

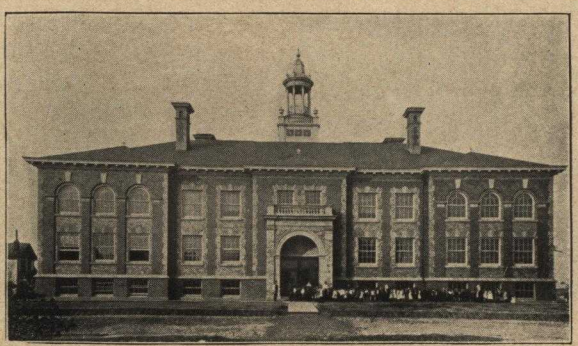
"Cabot's Quilt, triple-ply, which we used for deadening floors in the sixteen-apartment building, is serving most admirably the purpose for which it was intended."

W. A. POTEET.



POTEET APARTMENTS, KANSAS CITY, MO.
Owen & Payson, Architects, Kansas City, Mo. *J. W. McKamey, Builder.*

Schoolhouses. Next to light and ventilation, sound-deadening is perhaps the most important item of schoolhouse construction. Absolute quiet is indispensable for proper conditions for study, and if scholars are disturbed by the reciting, singing, and marching, above, below, and around them, they cannot apply themselves to their lessons, and they are under a constant nervous strain. In this field Quilt has scored a great triumph, and there are hundreds of schoolhouses in all parts of the country that have been deadened with it. We have a special illustrated



MILLER SCHOOL, AKRON, OHIO. *Frank O. Weary, Architect, Akron, Ohio.*
Deadened with Quilt.

book upon school deadening, which will be sent on request. The double-ply Quilt is mostly used for this purpose, but where building regulations call for it, the Asbestos Fireproof Quilt is used. Quilt is also just as valuable for making schoolhouses warm as for any other type of building, and school committees and school architects will save money for their clients and make the children comfortable by lining the walls with Quilt.

Pittsburg, Pa.

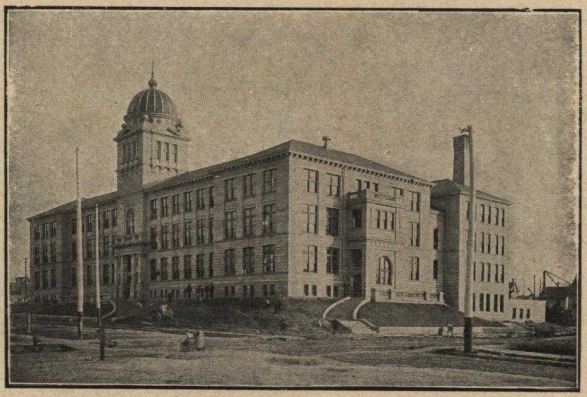
"I have used your Quilt in the Sharpsburg School, the Wilkinsburg School, and a residence for Mr. C. H. Allerton, where in every case it has given entire satisfaction."

J. EDWARD KEIRN,
Architect.

Columbia, S. C.

"We send you a photograph of the Anderson (S. C.) Graded School, in which we used your Quilt with entire satisfaction as a deadener between the first and second floors."

WILSON & EDWARDS,
Architects.



SOUTH SIDE HIGH SCHOOL, MILWAUKEE.
Deadened with Quilt.
H. C. Koch & Co., Architects, Milwaukee.

Y. M. C. A., CAMBRIDGE, MASS. **Deadened with Quilt, as per letter below.**

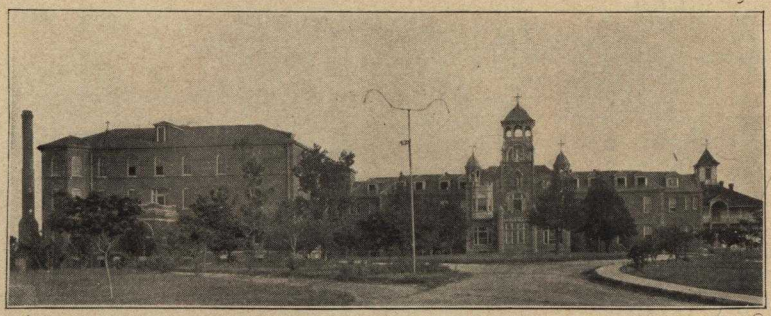
Gymnasiums, Clubs, etc.

Club houses or other buildings containing gymnasiums, bowling-alleys, etc., should be protected from the noises inevitable in such places.

"In sound-proofing the floor of a Y. M. C. A. Hall, which formed at the same time the ceiling of the gymnasium below, we used five layers of Quilt, one inch of mortar, and a single thickness of ordinary felt, the latter being placed between the lining floor and the top floor. Upon completion of the work a test was made by gathering in the gymnasium a small crowd of boys under instructions to make all the noise possible by running, jumping, use of clubs, striking dumb-bells, etc. Except that some of this sound traveled through an air duct (which has since been changed), it was inaudible in the hall above, even with the ear placed upon the floor."

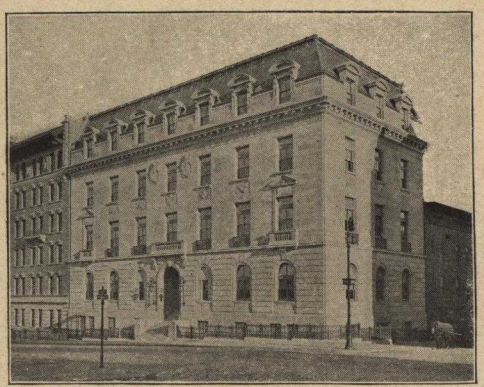
HARTWELL, RICHARDSON & DRIVER, Architects, Boston.

Hospitals, Asylums, Etc. Sound-proof floors and partitions are here indispensable. Patients who make a noise must be isolated, so that patients who require quiet can have it. Quilt has been very effective in hospitals, where its antiseptic qualities and freedom from decay are of great value. The Butler Hospital, Providence, R. I., Women's Hospital, Boston, Hospital for Insane, Northampton, Mass., are among those where Quilt has been used.



ST. JOSEPH'S INFIRMARY, FORT WORTH, TEX.
Deadened with Quilt.

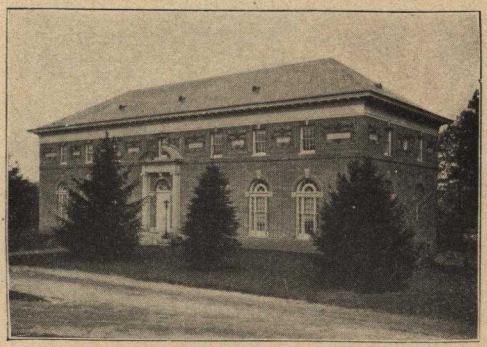
Deadening in Musical Studios. Musical studios put sound-deadeners to the supreme test. The rooms are used by students for practice, and unless each room is completely isolated from its neighbor, it would be impossible to use more than one at a time, because the notes would be mixed up most distractingly. Quilt has a most remarkable record in these buildings, dating from the time of the Nebraska University Conservatory of Music, in 1894, as per letter below from Mr. Willard Kimball, Director, to that of the Institute of Musical Art in New York, in 1910, where Asbestos Quilt was used. The results have been perfect. This feature was considered so important by those in charge of building the New England Conservatory of Music and Conservatory Chambers, that they consulted Prof. Charles L. Norton, of the Massachusetts Institute of Technology, upon the subject, and he made the most elaborate and exhaustive series of tests that probably ever have been made to determine what method of deadening should be used. The results were entirely in favor of Quilt, which proved to be by far the most efficient as well as by far the cheapest of all the methods used, and Professor Norton's conclusions were summed up as follows:



INSTITUTE OF MUSICAL ART, NEW YORK.
Deadened with Asbestos Quilt.
Donn Barber, Architect.

"The efficiency of the Cabot Quilt as a material for rendering the partition 'sound-proof' is so clearly demonstrated in these tests that I recommend it for use in the partitions for which these tests were made."

Quilt was used in both partitions and floors with absolute success, and the other pictures and verbal evidence shown upon this page prove conclusively that Quilt can be relied upon even in the most difficult cases. A copy of Professor Norton's report in full will be sent to anyone interested.



MARGARET OLIVIA HALL, NORTHFIELD.

(Russell Sage Foundation.)

Delano & Aldrich, Architects, New York, who say:

"Cabot's Quilt, used in this building for deafening purposes, has proved entirely satisfactory."

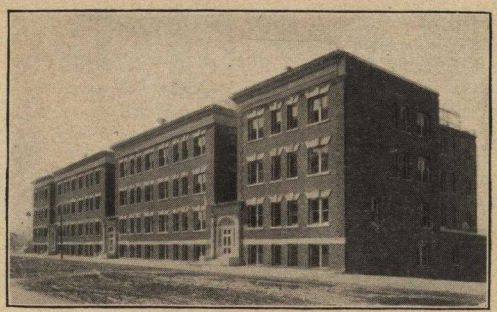
Conservatory of Music,
University of Nebraska,
Lincoln, Neb., August 5, 1895.

WM. J. WELSHANS, ESQ., Agent,
Omaha, Neb.

Dear Sir: I am pleased to say that I used twenty-five thousand square feet of Cabot's Sheathing Quilt as a deadener of sound, when building my new Conservatory of Music in this city last year, with entire satisfaction. It was used next to studding in all partitions, and between ceilings and floors, and I know of no other material at anything like its cost which I think would serve its purpose so well. Respectfully,

WILLARD KIMBALL,
Director.

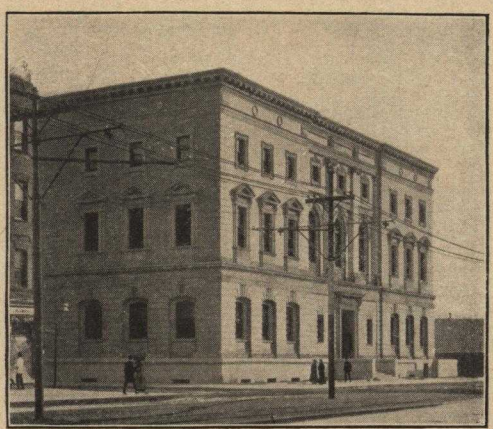
The Two Buildings for which Professor Norton's Tests were made



CONSERVATORY CHAMBERS.

(Studios and Dormitories for N. E. Conservatory of Music.)

E. T. Barker, Architect, Boston.



N. E. CONSERVATORY OF MUSIC, BOSTON.

Wheelwright & Haven, Architects.

Canadian Conservatory of Music,
Ottawa, December 21, 1903.

Dear Sir: A primary requirement of paramount importance in the construction of such an edifice as a Conservatory of Music is that the building shall be internally sound-proof, and in this essential particular the Canadian Conservatory of Music has exceeded the most sanguine expectations of both architect and Directorate. We used Cabot's Sheathing Quilt next to the studding in all partitions and between ceiling and floors with the above excellent results. Yours truly,

H. PUDDICOMBE,
Musical Director.

Society Lodges. Secret societies which wish to remain secret must enclose their lodges with a sound-proofing. The architects of the Boston Masonic Temple tried Quilt in the temporary lodges with such satisfaction that it was used in the splendid new building with the best results.

Mendon, Mich.

"The Deadening Quilt you sent us for deadening sound in our Masonic Temple was put down according to directions, and I can truthfully say it is all you claim for it — a complete deadener."

GEORGE ENGEL, W. M.,
Mendon Lodge, No. 137, F. & A. M.

Public Halls. Disconnection from adjoining rooms is necessary for lecture halls, for their sake; for dance halls, for the sake of the neighbors. Quilt accomplishes it. It is just elastic enough to give the most delightful touch of resiliency to a dancing floor.

MASONIC TEMPLE, BOSTON.
Deadened with Asbestos Fireproof Quilt.
Loring & Phipps, Architects.

Campbell, Va., July 7, 1909.

"A few years ago my brother used your Sheathing Quilt in his house. It has proved so satisfactory that I am thinking of using the same thing. Will you kindly send me circulars, prices, and terms?"

W. E. MONEY, The Money School.

Levis, P. Q., May 29, 1908.

"I am pleased to tell you that I am very pleased with the Cabot's Quilt I bought from you, and the proprietor of the building where it has been employed is very satisfied also. Be sure if I ever have another building of that kind to build, I will employ the same Quilt."

JOSEPH GOSSELIN.

Chicago, July 5, 1898.

"We have specified your Quilt for a number of buildings and have found it a valuable feature in reducing transmission of sound through partitions between musicians' studios and floors of apartments and residences as well as a protector from heat and cold in the construction of roofs and of frame buildings."

HANDY & CADY, Architects.

Summerside, P. E. I., January 31, 1898.

"I have only to say that Quilt is all you claim for it. The past week has been the coldest we have had for several years, — the mercury registering as low as 20° below zero, — but notwithstanding that fact, no frost has penetrated the new part of the house."

W. A. BRENNAN.

Marshalltown, Ia., November 26, 1900.

"The Quilt has worked like a charm. My house faces northwest and gets all the force of our Iowa northeast winds, and we have no bother so far to keep the thermometer up to 80°, whereas last winter we could hardly keep it up to 68°."

FRANK CROCKER, Architect.

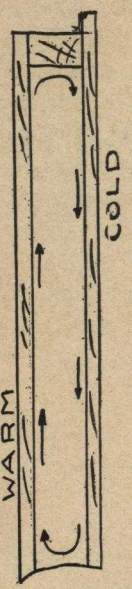
Boston, February 13, 1908.

"Your material probably has never been subjected to a severer test. A more exposed site than where my house stands would be difficult to find in New England. The Quilt proved its efficiency as an insulation, resulting in a noticeable saving of fuel during last week's zero weather."

MATTHEW SULLIVAN, Architect.

Cold Storage Insulation

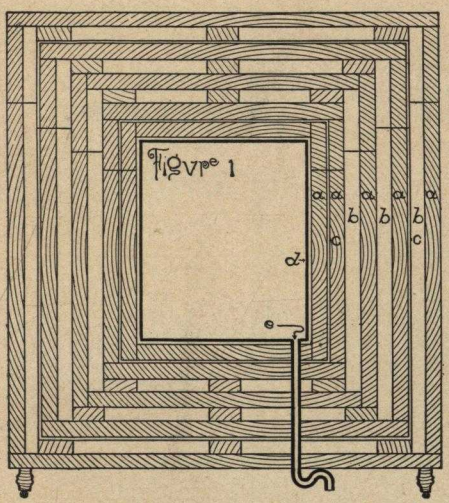
What are "Dead-Air Spaces?" It is universally admitted that the best of all insulators is dead air; but what is dead air, or when is air dead? Air is never absolutely still and dead, and the utmost that can be attained in insulation is to so confine it that the circulation will be reduced to the minimum and conduction by circulation made as difficult and long-delayed as possible. How can this be done? A great many people, including not a few engineers, seem to think that air-spaces built up of wood covered with a thin waterproof paper will accomplish it; but this theory will not bear investigation. It is obvious that in such large, regular chambers the air will circulate in rapid currents, and convey heat from the outside to the inside, as shown in the drawing. There is always an upward current on the warm side and a downward current on the cold side, and the conduction of heat is steady and continuous. The Quilt air spaces are very small and very irregular, — so irregular and uneven that they are full of obstructions and eddies that retard and prevent the circulation of the air, and so small that, as the same operation must take place in each as in the large and irregular built-up spaces before the heat can be conducted from one to another, the time for conduction is much greater and the amount of heat conducted is much less, making the insulation vastly superior.



Drawing showing heat conduction by air currents in built-up air spaces.

"Professor Ordway draws the conclusion from his experiments that air is a good non-conductor only so long as it is confined by the interstices of the material from circulating in currents around the box."

— *Riege & Parker.*



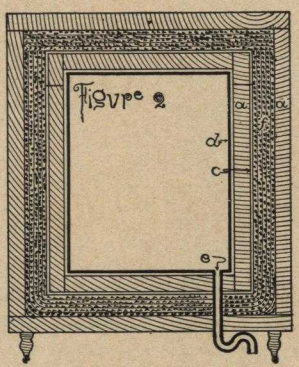


Figure 1. (*d*) Tin box; (*e*) outlet pipe; (*aaaaa*) five ⅞-inch matched boards; (*cc*) six layers of waterproof paper; (*bbb*) three air spaces.

Figure 2. (*d*) Tin box of same size as Figure 1; (*aa*) two boards; (*c*) two layers waterproof paper; (*f*) five layers double-ply Quilt, as shown.

Figure 1 took up two and one-half times as much space, cost sixty per cent. more, and was much less efficient than Figure 2.

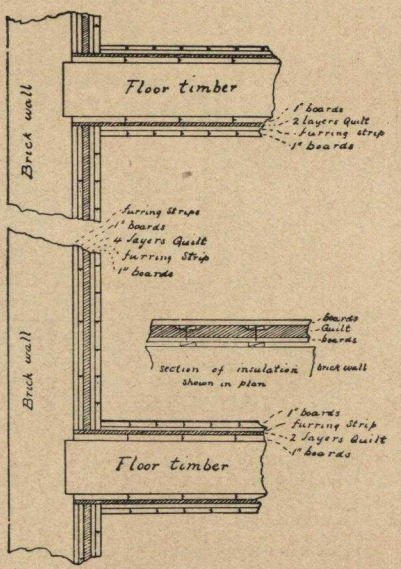
To illustrate this, we have had a test box made from the specifications of a prominent firm of cold storage engineers, and showing the construction which they have employed and consider to be as good as any of its kind (Figure 1); also another showing our own ideas (Figure 2). With these boxes a series of tests were made under exactly similar conditions. The construction is shown on preceding page.

Quilt is, therefore, the insulator that "carries its own dead-air spaces," and this scientific fact is what produces its great insulating power. This power is so great that sheet cork costing three times as much has twenty per cent. less efficiency and eight inches of mill shavings are about equal to four inches of Quilt. In addition to its efficiency and cheapness, Quilt has all the other cardinal virtues of a perfect cold storage insulator, which may be enumerated as follows: It is

1. Clean and inodorous.
2. Light and easy to apply.
3. Does not settle or break down.
4. Never ferments or rots.
5. Repels insects and vermin.
6. Fire retarding.
7. Is not injured by moisture.
8. Has no chemical action.

A Simple, Compact and Economical Method of Cold Storage Construction

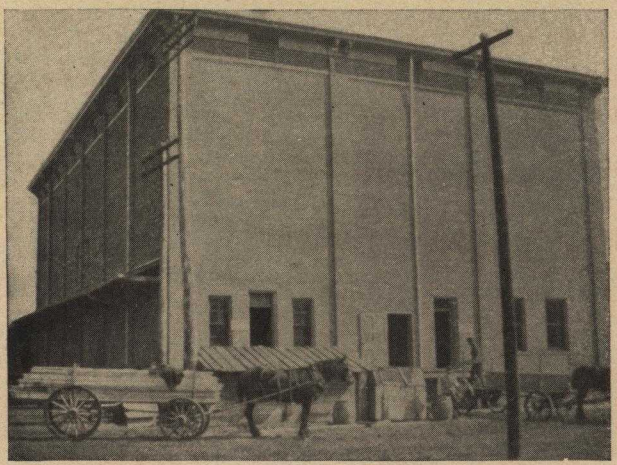
Quilt is used in dozens of different ways, and will go anywhere that a felt or paper will go, but the drawing shown here illustrates one very simple method by which splendid results may be obtained at low cost, and with the utmost economy of space. The amount of Quilt to be used varies, of course, with the conditions and the temperatures to be maintained.



Lay seventh-eighths inch matched boards on the studs, floor timbers, or brick wall, as the case may be. (In the latter case furring strips may be necessary.) Then lay from two to four thicknesses of Quilt, depending upon the required insulation. Over the Quilt lay furring strips (1 x 3 in.) twelve inches on centres, and finish with another layer of matched boards. This is a very simple and cheap method of construction, and the whole thickness of the insulation, including two layers of boards and the strips, is only about four inches; the Quilt, except where the strips are nailed, occupying two inches.

Grades used for Cold Storage and Similar Insulation

The Double-ply and Triple-ply Quilt are best for this purpose, or Asbestos Quilt for fireproof construction. Both the first-mentioned grades can be furnished with Waterproof paper in place of the Kraft paper if desired.



TOLEDO'S COLD STORAGE CO.'S PLANT.
Insulated with Quilt.

Sherman, Tex.,
April 20, 1904.

"Not too much can be said in praise of your Insulating Quilt, and I do not hesitate to blow your horn wherever I see it will do you any good."

E. ARNOLDI,
Manager Sherman Ice Co.

From the Same Job, Five Years Later.

Sherman, Tex.,
April 17, 1909.

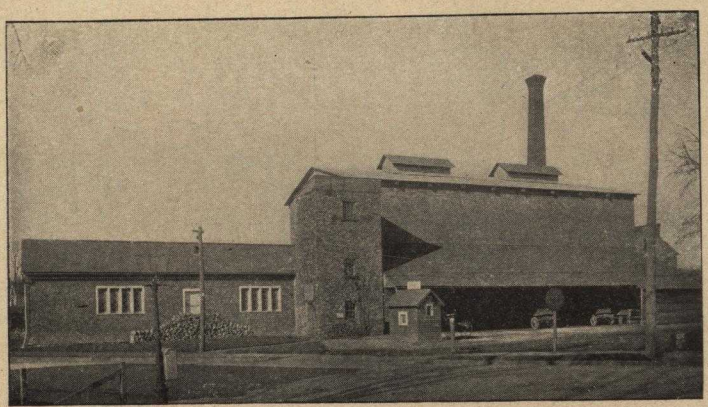
"Our storage houses, insulated with this material six years ago, are still in use and the insulation as good as it was on the day it was installed."

SHERMAN ICE CO.,
E. Arnoldi, President.

Stamford, Conn., July 20, 1899.

"We have three storage houses insulated with your Quilt, and cheerfully recommend it. . . . . We are taking ice from the houses with the corners as sharp as when stored last winter."

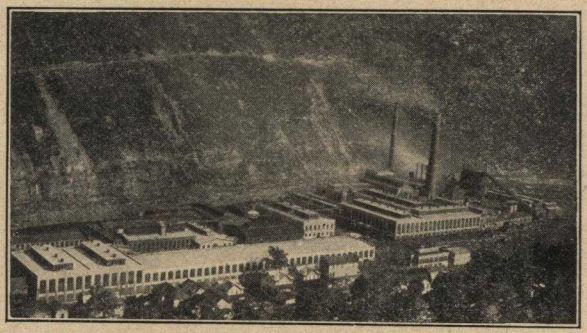
DIAMOND ICE CO.



PLANT OF THE DIAMOND ICE CO., STAMFORD, CONN.
Insulated with Quilt.

A Few of the Numerous Other Uses for Quilt

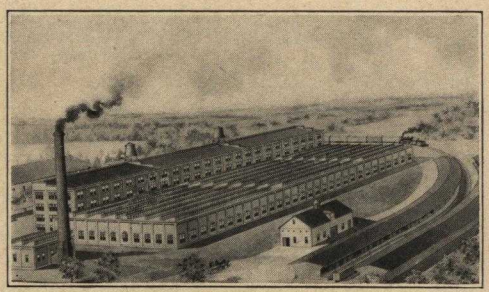
Increasing Efficiency and Saving Fuel in Factories.



WEST VIRGINIA PULP AND PAPER CO., FAIRMONT, W. VA.
F. G. Ten Broeck, Engineer, N. Y.

The most advanced mill architects and engineers are using Quilt as a roof lining, for the double purpose of conserving heat in winter, and for protecting operatives who work on the upper floor from the extreme heat in summer. The hot sun beating down upon an uninsulated roof will make the top floor so oppressive as to reduce the efficiency of the employees from 25 to 50%. If the roof is well insulated with Quilt, most of this loss will be prevented, and this saving will, in a few days, more than pay the cost. The West Virginia Pulp & Paper Co. Works, shown here, has been so treated, and in England part of the Cadbury Works, and the great department store of Derry & Toms in London.

Insulating Drying Rooms and Dry Kilns.



MINETTO-MERIDEN CO. WORKS, MINETTO, N. Y.

Such rooms need insulation to prevent loss of heat and maintain uniform high temperature, the problem being the same as cold storage, but reversed. The Minetto-Meriden Works, shown herewith, used large quantities of Quilt for this purpose. There is enormous waste of heat in the dry-kilns of lumber mills, furniture factories, etc., which a lining of Quilt will save.

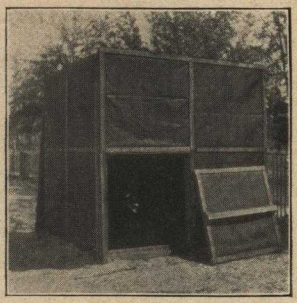
Poultry Houses.

Large quantities of Quilt are used for poultry houses. This is one of our largest industries, and is now being scientifically conducted. Poultrymen know that cold hens will not lay. Quilt, from 28 to 42 times as warm as common papers, solves the problem absolutely and pays for itself over and over. It is also absolutely sanitary and vermin-proof, which is of great importance.

"The house I have lined with your Quilt is the warmest one out of a dozen I have."
W. W. KULP, Poultryman, Pottstown, Pa.

Making Garages and Gas Plants Frostproof.

Acetylene gas plants need insulation, and Quilt is admirably fitted for it. The same is true of garages.



Quilt Sectional Orange Tree Protector.

Root Cellars, Fruit and Vegetable Storage, Cold Frames, Plant Protection, etc.

For all of these purposes there is a wide use for Quilt. The letter below from E. E. Holman, architect, is a forcible illustration of what it will do, and the little photograph shows the device of a Florida orange grower to protect his trees from frost. The little sun-house shown on page 6 could also be similarly used.

1020 Chestnut Street, Philadelphia, March 30, 1908.

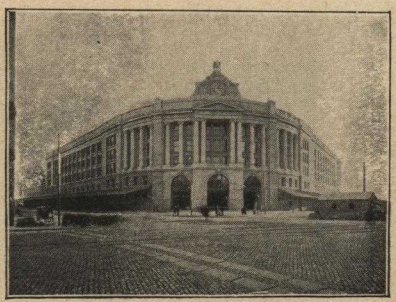
"You may remember that last fall I asked you whether you thought your Sheathing Quilt would sufficiently protect the porch boxes on a second-story porch to prevent bulbs in them freezing. You said you did not know, but sent me the Quilt, double-ply. I had it wrapped double on the sides and bottom of these boxes, which stand on a second-story porch railing, with a southern and eastern exposure. My bulbs had been planted, — tulips, daffodils and iris. We have had an average winter, and now, on the 30th of March, my tulips are in bloom — days ahead of any I can hear of in the city or country around us. My daffodils are coming on finely, and the iris is as well grown as it usually is in May. It is not supposed to bloom till June. The truth is, that all of these things have *almost* been forced by being kept warm. The tops were covered with small leaves and one thickness of old China matting, and the plants came up through the matting last month.

"I though you would be interested in hearing this, not as a new field for the Quilt, but as a proof of its warmth and non-conducting property. If my bulbs had just lived I would have thought it fine; but they are in remarkably prosperous condition, better than some of the same lot planted in sunny garden beds."

E. E. HOLMAN, Architect.

Ventilating Pipes, Heating Ducts, etc.

Hot-air heating pipes and ventilating ducts can be very cheaply insulated with Quilt, while the regular pipe covering would cost so much as to be prohibitive on such work. For common purposes the regular Quilt can be used, and where the temperatures are high, the Asbestos Quilt. Over sixty thousand square feet of Quilt was used for this purpose in the South Terminal Station at Boston, the largest railway station in the world. It has also been similarly used in the Capitol at Washington, the Massachusetts State House, etc.



South Terminal Station, Boston.
Shepley, Rutan & Coolidge, Architects.
Westinghouse, Church, Kerr & Co., Engineers.
Prof. S. Homer Woodbridge, Heating and Ventilating Expert.

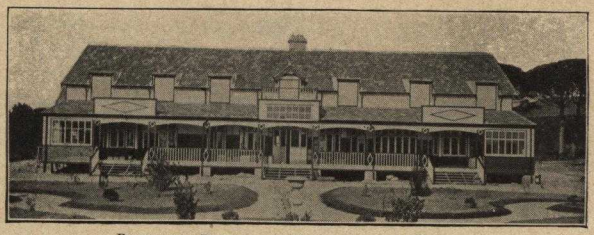
Barns, Stables, and Other Farm Buildings.

There are numerous uses, on the farm, for a real insulator like Quilt, such as those already cited and many others, from protecting the family and the stock to insulating the ice house and creamery.

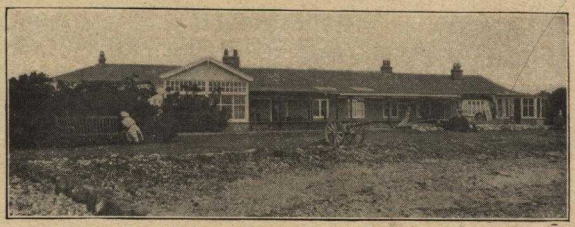
"I have used your Quilt and find it to be all you claim, and have advised . . . to use this material for his barns and chicken houses."

F. K. BOWEN, Hornell, N. Y.

Portable Houses, Camps, etc. The portable house, from its nature, is a summer house only unless lined with Quilt, and at a very slightly increased cost Quilt will make your portable house comfortable for house parties for snowshoeing, skiing, and other winter sports. Quilt makes them cooler in summer, too, which is a very important advantage. These two houses, one in France and the other in England, are of the portable type, lined with Quilt.



PORTABLE BUNGALOW CLUB-HOUSE IN FRANCE.
Lined with Quilt.

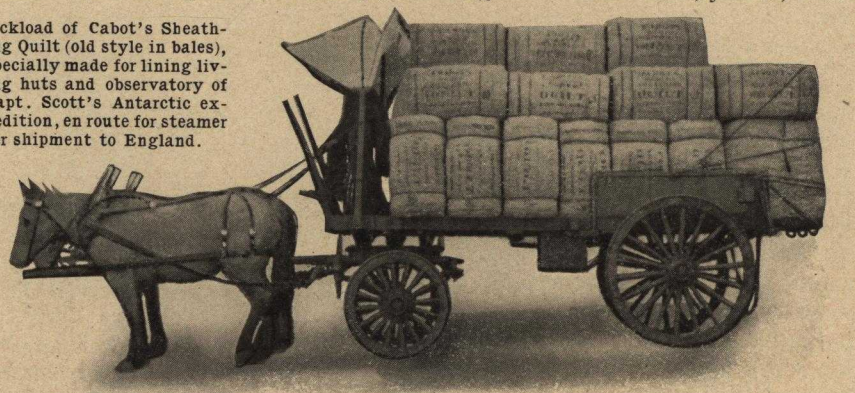


BUNGALOW OF PORTABLE CONSTRUCTION AT THORN'S BEACH, BEAULIEU, HANTS, ENGLAND.
Lined with Quilt.

Quilt for the South Pole! The portable living huts and observatory of Captain Scott's British Antarctic Expedition are lined with an especially-made burlap-covered Quilt to protect his men against the lowest temperatures on earth.

"The British Antarctic Expedition. As a protection against extremes of temperature, the living huts and observatory for Captain Scott's Antarctic Expedition, all of which were made by Messrs. Boulton and Paul, of Norwich, have been lined throughout — walls, floors, and roofs — with two layers of the double-ply Cabot's Quilt."—*London Times*, June 29, 1910.

Truckload of Cabot's Sheathing Quilt (old style in bales), specially made for lining living huts and observatory of Capt. Scott's Antarctic expedition, en route for steamer for shipment to England.



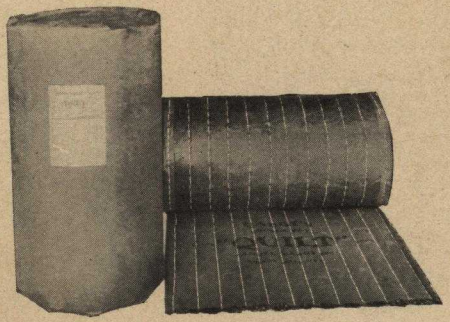
Small Refrigerators and Fireless Cookers. One of the original investigators of fireless cooking said that Quilt was the best insulator for them that he had found, and the problem is the same for small refrigerators, only in one case it is necessary to keep the heat in, and in the other to keep it out.

Miscellaneous. The uses to which Quilt can be put are too numerous to mention, but they range from those mentioned down to packing for bottles and lining for carpets.

Great Improvements Recently Made

Although none of the imitations of Quilt have ever approached it in quality, we have constantly improved it; such important improvements have now been adopted as to almost revolutionize the product, as follows:

Shipped in Rolls. Quilt has always hitherto been shipped in folded bales, and floor-layers and others have complained that the creases caused by the folds have made trouble with their work; also that the bale was a clumsy package to handle. We have now succeeded in rolling Quilt in rolls as compact as the old bales and of smaller dimensions, so that they can be easily handled, will roll out perfectly on the job, and have no creases to bother workmen.



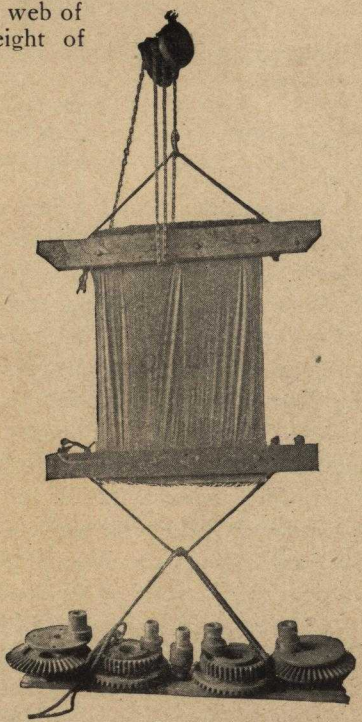
Wonderfully Strong Paper. The Quilt paper has always been strong enough if properly handled, but to make it "rough-house proof" we have adopted a wonderfully strong "Kraft" paper that is almost untearable. The picture shows a web of Quilt made with this paper sustaining a weight of almost nine hundred pounds!

Fastened Stitches. Another result of rough handling has been the ripping of the stitches, but in the new Quilt the stitches are made entirely fast.

Uniformity. By automatic devices the new Quilt has been made uniform and free from lumps or bunches.

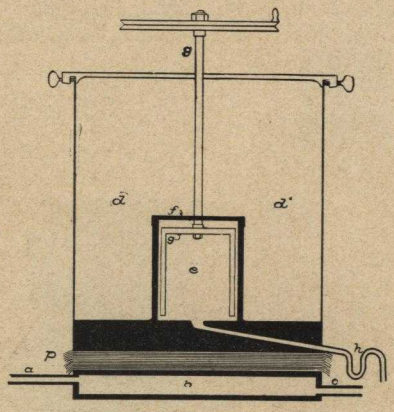
Splitting into 18-inch Strips. In the new Quilt the rows of stitches are only 3 inches apart and the two middle rows only 2½ inches apart, making it possible to split the web into two full 18-inch strips or any other width, for use between studding or wherever the full width of 36 inches is too wide.

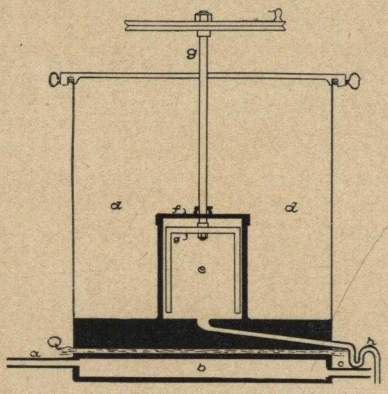
Splitting into Strips with Shears. A Knife Can Also Be Used.



Sheet of New Quilt Sustaining a Weight of Almost 900 lbs. of Castings.

Scientific Tests for Insulation





The above drawings show the scientifically accurate apparatus upon which our tests are made, with *forty layers* of cheap building paper in one, tested against *one* layer of double-ply Quilt in the other. The test demonstrated that the one layer of Quilt was more efficient as a heat insulator than the forty layers of paper.

Description: (*a*) Steam inlet pipe. (*f*) Calorimeter cover.
(*b*) Steam pan. (*g*) Stirrer.
(*c*) Steam outlet pipe. (*h*) Outlet drip of Calorimeter.
(*d*) Outer chamber. (*P*) Forty layers of building paper.
(*e*) Calorimeter. (*Q*) One layer of double-ply Quilt.

In these tests steam has been used to give a uniform known high temperature, and ice to give a uniform known low temperature, so that exact results would be insured. Steam flows from pipe (*a*) to pan (*b*) and out at outlet (*c*). This produces the uniform high temperature under the material to be tested (*P*) or (Q); (*d*) is a chamber filled with broken ice, which surrounds the Calorimeter (*e*) on all sides except the bottom, thus producing the uniform low temperature around the Calorimeter, which is filled with fine cracked ice, is covered by a water-tight cover (*f*), and the ice is gently agitated with the stirrer (*g*). The ice in the Calorimeter (*e*) is melted by the heat transmitted from the steam pan (*b*) through the insulating material (*P*) or (*Q*), and in no other way, as it is surrounded on all other sides by a freezing temperature. The melted ice from the Calorimeter (*e*) flows out through the drip (*h*) and the amount of ice melted in the Calorimeter (*e*) gives the efficiency of the insulating material.

(This apparatus should not be confounded with the metal oven, heated by a candle or lamp, which has been exploited as a "testing apparatus" by others. No oven can give uniform temperature all over its surface, and no candle or lamp can transmit uniform heat, especially when subject to drafts, as there. The thermometers shown are also subject to variations of temperature from cold and warm drafts, and the insulating materials give radiations of heat and cannot be uniform.)

Grades of Quilt

1. **Single-ply** is the grade commonly used for lining houses and similar work. One layer is equal to twenty-eight of common paper. It is about one-third of an inch thick.

2. **Double-ply** is used for sound-deadening, cold storage insulation, and for all house and similar work where special results are required. One layer is equal to more than forty of common paper. It is about one-half inch thick.

3. **Triple-ply** is a new grade especially designed for cold storage, refrigerators, and other special work. It is about three-fourths inch thick.

4. **Asbestos Quilt** is the double-ply Quilt covered on both sides with Asbestos. The regular Quilt is very uninflammable, as fire will not spread through the eel-grass, but Asbestos Quilt adds to this and produces a fireproofing effect far superior to that of sheet asbestos because of the great heat insulating power of the Quilt. This prevents conduction of heat through to inflammable substances on the other side, and asbestos alone does not do this. It is the only sound-deadener that is fireproof, and the only fireproofing that is an efficient deadener.

5. **Waterproof Quilt** is the double-ply covered with waterproof paper.

6. **Burlap Quilt** is made with burlap instead of paper, and is used in places where great strength is required, such as steel car insulation and Captain Scott's Antarctic huts, mentioned on page 18. The burlap can be fireproofed if desired.

Shipment, Orders, etc.

Quilt is shipped in rolls (see pp. 3, 19), and each roll contains a continuous sheet eighty-four feet long and three feet wide, or two hundred and fifty square feet. Each roll contains tin caps for nailing.

We always make prompt shipment and ship by the cheapest route unless otherwise instructed.

Orders from parties with whom we have had no previous dealings must be accompanied by remittance or satisfactory references.

Always specify the grade of Quilt desired.

Trade Mark

The word "Quilt" is our registered trade mark. Infringers will be prosecuted.

Suggestions for Use

Quilt can be used in any way that any other similar material is used, and with better results. Its value does not depend upon any peculiar manipulation, but the following sections illustrate a few methods which have proved especially satisfactory.

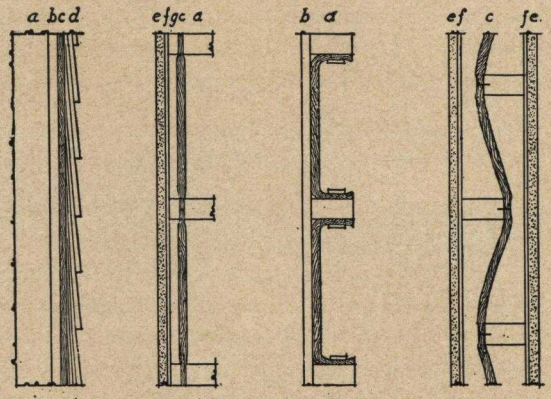


Figure 1 Figure 2. Figure 3. Figure 4.

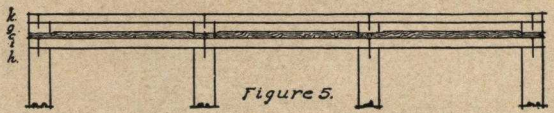


Figure 5.

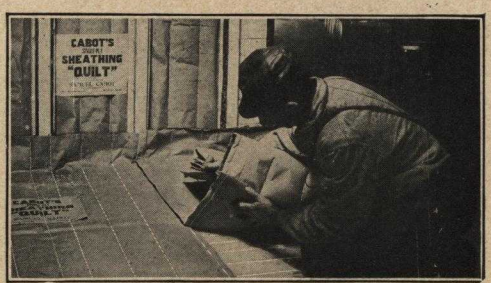
a a — Studding.	*f f* — Laths.
b b — Boards.	*g g* — Furring Strips.
c c — Quilt.	*h* — Floor Timbers.
d — Shingles.	*i* — First Flooring.
e e — Plaster.	*k* — Finish Flooring.

Figure 1 is a vertical section showing the Quilt laid on outside boarding and under the clapboards or shingles.

When applied in this manner all air is excluded and the possibility of drafts inside the walls prevented.

Figure 2 is a horizontal section showing the Quilt used in place of back-plaster.

Figure 3 shows another method of using Quilt in place of back-plastering. The Quilt is divided into two eighteen-inch strips (see cut page 19) and laid vertically between the studding.



Quilt should always be laid with lapped edges (as per illustration) so as to make a tight joint. The edges are made thinner for this purpose.

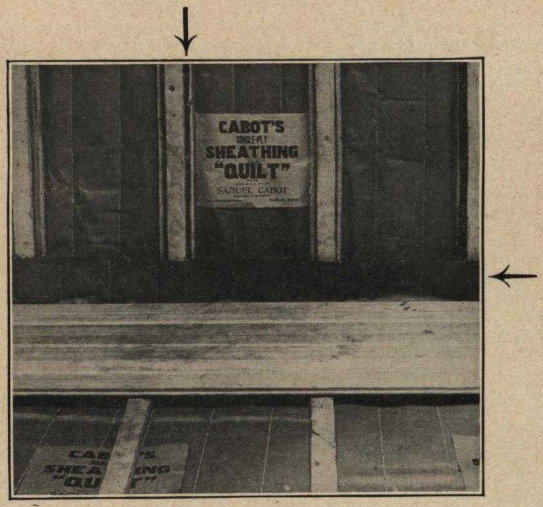
Figure 4 is a horizontal section showing the method of weaving Quilt through recessed or "staggered" studding. It is very effective in deafening partitions, but is more costly than the ordinary method, which is the same as that shown in Figure 2. The ordinary method is quite efficient for all except unusually trying conditions.

The method illustrated in Figure 4 (except that iron studs and metal lath were used instead of wood) was used in the tests made by Prof. C. L. Norton (see page 10).

Figure 5 shows a very effective method of deadening floors with Quilt. The Quilt (double-ply) is laid on the first (rough) flooring, and then furring strips three inches wide and from one to one

and one-half inches thick are laid upon it, without nailing, distant about sixteen inches apart, or "on centres," upon which the upper or finish floor is laid and nailed, being careful that the nails are not long enough to pass through the Quilt. Thus the upper floor floats upon the cushion of Quilt, and there is no telephonic connection through to the rooms below. If properly laid, the deafening effect is as nearly perfect as possible. Where the deafener has to be applied between the floors without strips, the first floor may be laid without nailing and the finish floor nailed down to that through the Quilt. The Quilt should be turned up under the edge of the base-boards all around to prevent conduction through the studding and timbers.

Note that these are both special methods, but they are not by any means the only methods by which Quilt is used for deadening in floors. It can be applied without strips and with nails or on the underside of the floor timbers where necessary, or in any other way that any similar material is used, and with vastly better results.



Photograph showing Quilt laid between studs in place of back-plaster as per Figure 3, arrow at top showing edge held by fastening strip; and under floor with strips, arrow at side showing turn-up under base-board, which is important in floor-deadening.

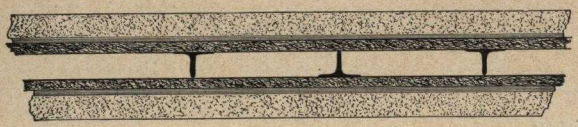


Figure 6.

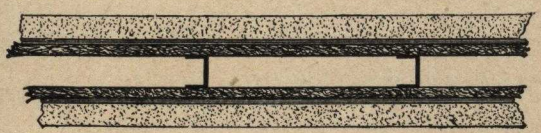


Figure 7.

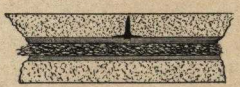


Figure 8.

Figures 6 and 7 show how Quilt can be used in deadening very thin fireproof partitions. Quilt is laid directly upon the Channel or Tee iron studs, the metal lath being wired through the Quilt to the stud, or, in case of economy studs, both are held by the lip of the stud. Figure 8 shows the thinnest possible partition.

Figure 9 shows Mr. Robert C. Spencer, Jr.'s, method of insulating the walls of cement plaster houses with Quilt.

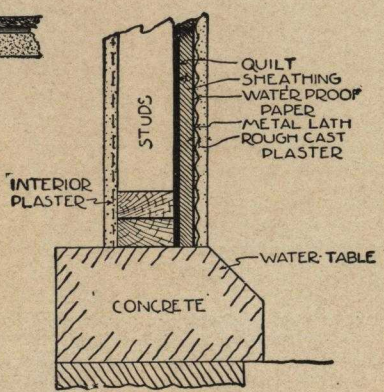


Figure 9.

A Few More Opinions From Users

New York, May 9, 1910.

"On the back page of your catalogue I find a picture of my house in Lenox, Mass., which I built in 1902, and used your Stains and Quilt — both satisfactory."

THOMAS SHIELDS CLARKE.

Long Meadow Farm, Bedford, N. Y., May 22, 1905.

"Your Sheathing Quilt is the finest thing I ever saw in that line. I have used it on all my buildings and find it invaluable for both keeping out heat in summer and cold in winter."

BLAIZE LORILLARD HARSELL.

HOUSE OF THOMAS SHIELDS CLARKE, ESQ., LENOX, MASS.
Lined with Quilt and Stained with Cabot's Shingle Stains.
Wilson Eyre, Architect, Philadelphia, Pa.

New York City, September 29, 1905.

. . . "I first put on your Cabot's Sheathing Quilt. The effect last winter was extremely satisfactory. It was impossible practically to keep the old house warm with the most improved heating, as it was a mere shell. Now the improvement is marked in every way. For those who prefer to make an old house livable, surely Cabot's Sheathing cannot be too highly recommended."

B. T. FAIRCHILD.

Essex, N. Y., October 31, 1906.

"Enclosed find check for eight bales of Cabot's Sheathing Quilt, single-ply. I used your Sheathing Quilt on a house I built in Buffalo, N. Y., about ten years ago, and it was everything you claim for it. Lansing and Bierl were the architects. I am now going to build an ice house and cooling room, also a large chicken house."

C. J. COATSWORTH.

Chicago, September 16, 1895.

"I have tried a great many kinds of material for sound-proofing for Steinway Hall. I found Cabot's Quilt to be the best."

D. H. PERKINS, Architect.

Brooklyn, N. Y., October 18, 1906.

"I was much surprised at the non-inflammable quality of your felt, and would hardly have believed it so good had I not seen it. I am sorry I did not know of this some time ago, when I purchased some other felt for use in this house. I shall keep your pamphlets for reference, and intend showing them and the sample to a builder here who may be of interest to you."

RAYMOND CILLEY.

Lakewood, N. J., March 10, 1908.

"I built a house last summer in which I used Sheathing Quilt under the shingles and also between the studding. I sheathed all the rooms with half-inch tongued and grooved boards, and decorated the walls with Sanitas and Japanese crepe. The result is, I have a cheaper, warmer, cleaner, and more beautiful house than I could possibly get by using lath and plaster."

REV. M. T. ELSING.

St. John, N. B., January 28, 1908.

"I used your Stains on a summer cottage erected last year, on roof and walls, the silver-gray on wall, with fine effect. Have used your Quilt for deafening frequently, and also in place of back-plastering, and find it effective and cheap. Am now specifying it for back-plastering in a brick house, which is a little unusual, but the owner wants a warm, dry house."

J. T. McKEAN, Architect, 6 Richmond Street.

Haddam, Conn., March 27, 1907.

"Please ship me one bale of your Sheathing Quilt. I have used it on two houses in the past with great success."

F. A. DALTON.